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ABSTRACT

This report reviews research that demonstrates how gender inequity is not only learned and accepted in the socialization process that starts at home, but is also present in the school environment from the very early years, consciously or unconsciously, reinforcing sex stereotypes. Findings are examined in three areas: (1) interactions in the classroom that are both teacher-to-student and student-to-student; (2) instruction-related features involving relations between classroom activities and the gender of the students assigned to perform those activities; and (3) the perceptions of gender roles through teachers' modeling of sex stereotypes in the classroom and through teachers' and adults' perceptions of children's gender. Analyzing the findings of the use that students make of stereotyped gender cues reveals how students distinguish themselves from the other gender, how they see the role of the opposite gender, and how the students' overall perceptions of sex roles affect social interactions and individual performance. The review also reveals that fundamental elements of the school environment still develop and reinforce inequity: teachers are unaware of their gender bias; there is a lack of school textbooks and other instructional materials that are sex-bias free; and children interact according to strongly stereotyped gender schemes. The report concludes by stating that nonsexist curricula have been shown to make a difference in children's gender equity values. (Contains 57 references.) (GLR)

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GENDER EQUITY AND CLASSROOM EXPERIENCES:

A REVIEW OF RESEARCH.

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and

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Gender equity and classroom experiences:

a review of research.

Following the trend of the eighties, it seems that during the nineties, gender equity will continue to be one of the most popular themes of the social issue arena. Despite the fact that in many societies the number of women is equal and sometimes greater than men, females are defined as a minority segment of the population. This definition recognizes their unequal status in the society at large. At the same time, after more than twenty years of official policies requiring gender equity in the school and the work place, gender inequity is still present in American classrooms.

This paper report a review of research which describes and summarizes findings that demonstrate how gender inequity is not only learned and accepted in the socialization process that start at home, but that the school environment, from the very early years, consciously or unconsciously reinforces sex stereotypes.

It is a well-known fact that when children start school, they already behave according to gender differences. Educational research has shown that the first grades of school play an important role in reinforcing those differences. However, until now, there has been no data which provide a comprehensive description of the phenomena. For example it is not clear which specific environmental areas of the school reinforce sex stereotypes. It is known that teachers' behavior influence students' gender differentiated performance but the quality of teacher-student interactions has been little discussed as promoting gender inequality. The purpose of this review is to discuss, analyze and summarize research findings that describe the performance and

treatment of students in the early childhood classroom according to their gender.

A first approach to research findings on gender equity in the school environment shows that there are several ways in which sex stereotypes are reinforced in the classroom. Because gender equity is a value and value condition attitudes, opinions and behaviors, this review focuses on the classroom environment variables that influence the development of opinions, attitudes and behaviors related to gender. Gender equity is a value that can be defined as the force that drives someone to make a decision related to others in which the outcomes of the decision are matched to the effort of the individual and not to the gender stereotype (Crow, Fok, Hartman & Payne, 1991).

In order to structure the study, the findings have been classified into three areas:

a) The area of interactions in the classroom discusses: teacher-students interactions and student-student interactions. In this area the review looks for the ways in which research describes teachers' interactions with male and female students. It also looks for the ways in which students interact with the same and with the other gender.

b) The area of instructional related features discusses research findings that describe the relations between the classroom activities and the gender of the students assigned to perform those activities. This area also describes the research finding on the representations of gender in the classroom materials.

c) The review of research findings in the area of the perceptions of gender roles looks for teachers' modeling of sex stereotypes in the classroom and for teachers' and adults' perceptions of children gender. In addition, the area of gender perception describes the research findings on the use that the students make of stereotypes gender cues to see themselves and to

relate with others.

Describing how teachers model for equity/inequity in the classroom, the review discusses the language used by teachers to address boys and girls and the teachers' choice of activities and materials to be used for one gender or the other.

From the point of view of the teachers' and aduits' perceptions of students' gender, the review looks for the teachers' awareness of their treatment of different genders and their differential perception of students' skill according to gender. This area of the review also looks into the research findings on other adult perceptions of students' stereotypic gender differences.

Analyzing the research findings in the use that students make of stereotypic gender cues to relate to others, the review describes: a) how students distinguish themselves from the other gender, b) how they see the role of the opposite gender, and c) the students' overall perceptions of sex roles in social interactions and individual performance.

a. Classroom Interactions.

Interactions with teachers are a central part of children's school experiences. Research reveals that there are quantitative and qualitative differential experiences for boys and girls.

Teachers-Student Interactions: Quantitative Experiences.

A meta-analysis of 81 teachers-student interaction studies covering preschool through high school, revealed that teachers consistently interacted more with boys than girls (Kelly, 1988). Teachers averaged 44% of their time with girls and 56% of their time with boys.

In similar findings, elementary and preschool teachers had more positive and negative, verbal and nonverbal interactions and more contact about instruction and directions with boys

than with girls (Melnick & Raudenbush, 1986; Murphy, 1986; Simpson & Erickson, 1983; Brophy & Good, 1974; Serbin, O'Leary, Kent, & Tonick, 1973).

Preschool teachers also had higher rated of extended conversations with boys and reacted more often to boys' request for attention (Serbin et al, 1973).

Teacher-Student Interactions: Qualitative Experiences.

Boys received more detailed directions than girls from their teachers in order to be able to accomplish a task; whereas girls were given help or the teacher finished the task for them (Murphy, 1986; Serbin at al, 1973).

Elementary and preschool teachers praised boys more than girls for the intellectual quality of their answer (Murphy, 1986; Dweck, Davidson, Nelson & Ehna, 1978). Furthermore, 4th and 5th grade boys' and girls' self-esteem was higher when the teachers' interactions were like those typical for boys; and lower after interactions like those typical for girls (Dweck et al, 1978).

Botkin & Twardosz (1988) found that female preschool teachers gave more physical affection to and smiled more at girls than boys.

Student-Student Interactions.

Children often segregated themselves by sex (Lockheed, 1985). Six year old children reported that they played more with the same-sex than opposite-sex friends (Feiring & Lewis, 1987). Fagot (1981) found that boys were reinforced for "boy" behaviors and "punished" for cross-sex stereotyped behaviors by their peers in preschool.

Preschoolers spent significantly less time playing with toys stereotyped for the opposite sex in the presence of an opposite-sex peer than when alone (Serbin, Connor, Burchardt, &

Citron, 1979).

On the other hand, children can engage in cross-sex play. Preschool children in an open school (where the structure is set up to meet the individual needs of the child without sex role expectations) played more with opposite-sex children than those in a traditional kindergarten (59% vs. 31% of play time) (Bianchi & Bakeman, 1978).

Serbin, Tonick, & Sternglanz (1977) found that in classes where the teachers reinforced cooperative cross-sex play by positive comments, preschoolers increased their amount of cooperative cross-sex play.

Another finding indicated that sex role flexibility correlates with prosocial behavior in boys of preschool age (Doescher & Sugawara, 1990).

b) Instructional Related Features.

Classroom activities.

Several studies show that classroom activities frequently allow boys and girls to have different classroom experiences. In a series of three studies of preschoolers, Huston & Carpenter (1985) found that girls chose more highly structured activities (controlled and/or set up by adults) and boys chose more low structured activities (children can create own structure). When engage in high structure activity, both boys and girls comply and interacted with adults, and decreased peer interaction. In low structure activity, both girls and boys showed leadership and complied with peers.

Fagot (1981) found that experienced male and female preschool teachers tried to get boys to focus on school related activities and behaviors (developing fine motor skills, extending

focused time at circle time or in small groups) which are already preferred by most girls. The girls where reinforced for these behaviors but not challenged to try anything else.

The study of Serbin, Connors, & Citron (1978) shows that when proximity-seeking and dependence on the teacher, more commonly found in girls' behavior, were discouraged and task persistence and exploration of new toys away from the teacher were reinforced, both boys and girls increased in task persistence and exploration and decreased in proximity-seeking.

Classroom Materials.

Examining the written and picture content of children's books reveals the extent to which children are exposed to sex-equitable or sex-role stereotyped images of people.

The quantitative representation of female:male has improved over the last twenty years (Purcell & Stewart, 1990: Williams et al, 1987: Heintz, 1987). However, males still outnumber females in storybooks (Williams et al, 1987: Garcia et al, 1990), and basal readers (Purcell & Stewart, 1990: Gonzalez-Suarez & Ekstrom, 1989: Hitchcock & Tompkins, 1987).

Qualitatively, the amount and type of career and personal activity choices depicted for women are severely limited and stereotyped (Purcell & Stewart, 1990; Heintz, 1987; Williams et al, 1987; Nilsen, 1987; Garcia et al, 1990; Gonzalez-Suarez & Ekstrom, 1989: Weiller & Higgs, 1989).

Personality characteristics of main characters still reveal sex-stereotyping for males and females, such as female being dependent, passive and nurturant and males being independent, active and not showing affection or emotion (Purcell & Stewart, 1990; Williams et al, 1987; Tetenbaum & Pearson, 1989; Gonzalez-Suarez & Ekstrom 1989). Male-linked traits are valued more than female-linked traits. (Vaughn-Roberson et al, 1989; Hitchcock & Tompkins, 1987).

There is evidence that children's sex-stereotyped attitudes can be changed through reading. Preschoolers changed their attitudes about sex-stereotyped toys after being read non-stereotyped books (Ashton, 1983; Berg-Cross & Berg-Cross, 1978). By reading selected books, elementary children changed their attitudes about roles and occupations that females (Ashby & Wittmaier, 1978; Scott, 1986; Scott & Summers, 1979) and males (Scott, 1986) can do.

c. Perceptions of Gender Roles.

Teachers as Models for Sex Equity/Inequity.

Because children do model teachers, the language, the choice and presentation of activities and materials by the teachers are important in sending sex-role information to children.

Preschool, elementary, and secondary teachers tended to use more male-related language (Gelb, 1987; Richmond & Dyba, 1982). Preschool teachers use more generic male pronouns than female or neutral pronouns at teacher-directed circle time (Gelb, 1987). Additionally, the same study found that children heard many more specific male than female pronouns in fingerplays, songs, stories, and in discussions of animals even though the sex was not known.

When teachers made sex-typed introductions of toys --boys demonstrated trucks and girls demonstrated dolls--, three and four year old children made stereotyped choices (Serbin, Connor, & Iler, 1979). When nonstereotyped introductions were made, there was no significant relationship between the sex of the child and the toy s/he chose.

Materials, pilot-tested as equally interesting to boys and girls, were labeled strongly by teachers as appropriate for girls, boys, and both sexes (Bradbard & Endesley, 1983). Preschool

girls and boys manipulated and recalled toys labeled for their same-sex the most; for the opposite sex the least, with intermediate amounts for those labeled for both sexes.

Early childhood teachers were found to channel children into sex-stereotyped activities (Ebbeck, 1984). Girls' participation in play areas that develop mathematical and spatial skills -- -block, sand, climbing, and construction activities -- was unbalanced.

Teachers from Kansas and Texas chose books to read aloud to children that had twice as many male as female protagonists and had images of female that were narrowly defined and frequently negative (Smith, Greenlaw, & Scott, 1987).

In two studies, Serbin, Connor, & Citron (1981) found that teacher presence in an activity area identified as girl -- or boy-preferred -- trucks, blocks, dolls, housekeeping-- increased both boys' and girls' rates of participation in those areas during free choice time.

Teachers' and Adults' Perceptions of Children's Gender.

Elementary teachers almost never reported different treatment of or feeling toward girls and boys (Guttentag & Bray, 1976). However, daycare teachers assigned light objects for girls and heavy objects for boys to carry (Murphy, 1986), revealing sex-role stereotyped perceptions about girls' and boys' strengths and weaknesses.

Gold, Crombie, & Noble (1987) found that preschool girls, and not boys, who were perceived as less cooperative were rated as less competent intellectually by their teachers. The objective test did not indicate that these girls had lower intellectual ability than the other children. Grant (1985) found that white first grade girls who were perceived as discipline problems were treated more harshly than other children.

Kindergarten-fourth grade teachers in Israel rated boys as having more academic

potential than girls which was not confirmed in psychometric tests (BenTsvi-Mayer, Hertz-Lazarowitz & Safir, 1989). Also teachers thought more about boys than girls in their classes after school and thought boys were more interesting than girls.

Parents may also have some sex-stereotyped perceptions about children. Mothers did not have sex-stereotyped perceptions of infants (Vogel, Lake, Evans & Karraker 1991). However, parents treated boys and girls differentially on their encouragement of sex-typed activities, but not in other activities (Lytton & Romney, 1991). Parents chose sex-stereotyped toys and colors for the play environment of their 5-25 month old children (Pomerleau, Bolduc, Malcuit, & Cossette, 1990).

Adults evaluated more boys negatively than girls who exhibited cross-sex play and personality traits (Martin, 1990). Potential teachers and parents had sex-stereotyped belief about the importance and difficulty of different academic subjects for girls and boys (Leung, 1990).

Students Stereotypic Gender Cues.

Children, having processed sex-stereotyped knowledge and experiences as mentioned above, may display sex-stereotyped behavior and beliefs. Second and fourth graders incorrectly remembered occurrences of non traditional sex role information, thereby conforming to and maintaining their stereotypic gender schema (Meehan & Janik, 1990). Beginning at 27-32 months, children responded in a sex stereotyped way to sex stereotyped tasks (Etaugh & Duits, 1990).

Students between the ages of 5-18 years conformed to sex-stereotyped images and roles when distinguishing themselves from the opposite sex (Biernat, 1991), in their perceptions of infants (Vogel, Lake, Evans, & Karraker, 1991), and in their use of time (Mauldin & Meeks,

1990).

Children's understanding of language also contains stereotypic cues. Hyde (1984) found that most first, third, and fifth graders created males after hearing the gender-neutral "he" used in a story. Eighty-eight percent of preschoolers assumed maleness when asked to tell stories about indeterminate gender drawings (Gelb, 1987).

Hyde (1984) found that even college students assumed maleness when the gender-neutral "he" was used. In a review of several studies, Todd-Mancillas (1981) concluded that generic male words were not perceived as equally referring to males and females at all age levels. However, the use of alternative words and pronouns did elicit more equal perceptions by children and adults (Hyde, 1984; Todd-Mancillas, 1981).

Conclusions.

On the basis of the research findings reviewed, it can be said that twenty years after education equity was mandated by Title XI in the Educational Amendment of 1972, gender equity, although not ignored, continues largely unresolved in the school environment.

The review of research in the three areas suggested in this study, demonstrated that fundamental elements of the school environment remain which develop and reinforce inequity.

An important amount of research in teachers-student interactions reveals that, consciously or unconsciously, teachers continue to have gender bias in their professional performance. More than two decades of social movements to promote gender equity have passed. However, teacher education has not adequately prepared teachers to achieve sex equity in their classrooms. If gender stereotypes are deeply rooted in teachers' personalities and cannot

be changed through formal education, teacher education should at least provide educators with the skills to become aware of their own biased perceptions of students and the factors in the learning environment which inhibit each child's potential from developing fully.

This review of research reveals that gender equity values in teachers is an unfulfilled goal. Research shows that is not infrequent that teachers are unaware of their bias (Kelly, 1988; Richmond & Dyba, 1982; Guttentag & Bray, 1976). Consequently, there is a need to educate teachers on procedures to provide quantitatively and qualitatively equal classroom experiences for girls and boys. There is also a need to educate other adults who relate to children in the school on gender perceptions and stereotyped modeling.

The analysis of research on instructional gender related features reveals that there are important advances in the search for a sex-bias free classroom environment. Specifically some improvement has been reached in sex equitable representation in textbooks and other instructional material. But, the findings also reveal that there is a need to continue and increase the effort for classroom materials which promote gender equity and instructional activities that do not distinguish students by sex. Instructional materials and curriculum activities with sex-bias, reinforce the influence of the media and suggest a potential effect on children's development of sex-fair or sex-bias attitude and sex-role expectations.

The review of research findings in children's perceptions of gender roles reveals that children interact according to very strong stereotypic gender schemes (Meehan & Janik, 1990: Biernat, 1991; Vogel & al, 1991; Mauldin & Meeks, 1990). The school environment seems to do a good job in perpetuating those schemes. Boys have the advantage in the quality and quantity of interactions with teachers. Girls may be learning to question their intellectual ability and to

become non assertive. Boys seem to be more valued in the class and both girls and boys pick up that message. At the same time, girls may have more learning experiences about affection being a two-way process and boys may be learning not to express physical affection and to suppress emotions. This may help form stereotyped sex-role behavior and may be detrimental to the development of a social perspective which values male- and female- linked traits in both sexes.

On the other hand, there is evidence that, despite the influence of the social environment and the mass media, a non-sexist curricula can make a difference in children's gender equity values. Koblinsky & Sugawara (1984) and Guttentag & Bray (1976) have shown that appropriate activities and teachers trained: a) in the use of non-sexist language, b) in how to edit sexist books, c) in the modification of play areas, and d) in the use of non-sexist curricular materials can reduce preschool and kindergarten children's ideas about toys/objects and adult activities that are commonly linked to one specific gender.

References.

Ashby, M.S. & Wittmaier, B.C. (1978). Attitude changes in children after exposure to stories about women in traditional or non-traditional occupations. Journal of Educational Psychology, 70 (6), 945-949.

Ashton, E. (1983). Measures of play behavior: The influence of sex-role stereotyped children's books. Sex Roles, 9, (1), 43-47.

BenTsvi-Mayer, S., Hertz-Lazarowitz, R., & Safir, M.P. (1989). Teachers' selections of boys and girls as prominent pupils. Sex Roles, 21 (3/4), 231-245.

Berg-Cross, L. & Berg-Cross, G. (1978). Listening to stories may change children's social attitudes. Reading Teacher, 31, 659-663.

Bianchi, B.D. & Bakeman, R. (1978). Sex-typed affiliation preferences observed in preschoolers: Traditional and open school differences. Child Development, 49(3), 910-912.

Biernat, M. (1991). A multicomponent, developmental analysis of sex typing. Sex Roles, 24(9/10), 567-585).

Botkin, D. & Twardosz, S. (1988). Early childhood teachers' affectionate behavior: Differential expression to female children, male children, and group of children. Early Childhood Research Quarterly, 3, 167-177.

Bradbard, M.R. & Endesley, R.C. (1983). The effects of sex-typed labeling on preschool children's information seeking and retention. Sex Roles, 9(2), 247-260.

Brophy, J.E. & Good, T.l. (1974). Teacher-student relationships: Causes and consequences. NY: Holt, Rinehart & Winston, Inc.

Crow, S.M., Fok, L.Y., Hartman, S.J. & Payne, D.M. (1991). Gender and values; what is the impact in decision making. Sex Roles, 25(3/4), 255-268.

Doescher, S.M. & Sugawara, A.I. (1990). Sex role flexibility and prosocial behavior. Sex Roles, 22(1/2), 111-123.

Dweck, C., Davidson, W., Nelson, S. & Enna, B. (1978). Sex differences in learned helplessness: II. The contingencies of evaluative feedback in the classroom; III. An experimental analysis. Developmental Psychology, 14, 268-276.

Ebbeck, M. (1984). Equity for boys and girls: Some important issues. Early Child Development

and care, 18, 119-131.

Etaugh, C. & Duits, T. (1990). Development of gender discrimination: Role of stereotypic and counterstereotypic gender cues. Sex Roles, 23(5/6), 215-221.

Fagot, B. (1981). Male and female teachers: Do they treat boys and girls differently? Sex Roles, 7, 263--271.

Feiring, C. & Lewis, M. (1987). The child's social network: Sex differences from three to six years. Sex Roles, 17 (11/12), 621-635.

Garcia, J., Harrison, N.R., & Torres, J.L. (1990). The portrayal of females and minorities in selected elementary series. School Science & Mathematics, 90(1), 2-12.

Gelb, S.A. (1987). Generic pronouns in early childhood education: Were there female dinosaurs, too? Paper presented at the annual meeting of the American Educational Research Association. Washington, D.C. (ERIC Document Reproduction Services No. ED 285 673).

Gold, D., Crombie, G., & Noble, S. (1987). Relations Between teachers' judgment of girls' and boys' compliance and intellectual competence. Sex Roles, 16(7/8), 351-358.

Gonzalez-Suarez, M. & Ekstrom, R.B. (1989). Are U.S. elementary School reading textbooks sex stereotyped? Paper presented at the Annual Meeting of the American Educational Research Association. San Francisco, CA. (ERIC Document Reproduction Service No. ED 307 288).

Grant, L. (1985). Race-gender status, classroom interaction, & children's socialization in elementary school. In L.C. Wilkinson & C.B. Marrett (Eds.), Gender influences in classroom interaction (pp.57-77). Orlando, FL: Academic Press, Inc.

Guttentag, M. & Bray, H. (1976). Undoing sex stereotypes. NY: McGraw-Hill.

Heintz, K. (1987). An examination of the sex-role and occupational-role presentations of female characters in award-winning children's picture books. Paper presented at the Annual Meeting of the International Communication Association. Montreal, Quebec, Canada. (ERIC Document Reproduction Service No. ED 286 225).

Hitchcock, M.E. & Tompkins, G.E. (1987), Basal readers: Are they still sexist? Reading Teacher, 41(3), 288-292.

Huston, A.C. & Carpenter C.J. (1985). Gender differences in preschool classrooms: The effect of sex-typed activity choices. In L.C. Wilkinson & C.B. Marrett (Eds.), Gender influences in classroom interaction. Orlando, FL: Academic Press, Inc.

Hyde, J.S. (1984). Children's understanding of sexist language. Developmental Psychology, 20, 697-706.

Kelly, A. (1988). Gender differences in teacher-pupil interactions: a meta-analytic review, Research in Education, 39, 1-23.

Koblinsky, S.A. & Sugawara, A.I. (1984). Nonsexist curricula, sex of teacher, and children's sex-role learning. Sex Roles, 10(5/6), 357-367.

Leung, J.J.(1990). Aspiring parents' and teachers' academic beliefs about young children. Sex Roles, 23(1/2), 83-90.

Lockheed, ME. (1985). Some determinants and consequences of sex-segregation in the classroom. In S. Klein (Ed.), Handbook for achieving sex equity through education (pp. 167-184). Baltimore, MD: Johns Hopkins University Press.

Lytton, H. & Romney, D. (1991). Parents' differential socialization of boys and girls: A

meta-analysis. Psychological Bulletin, 109, 267-296.

Martin, C.L. (1990). Attitudes and expectations about children with nontraditional and traditional gender roles. Sex Roles, 22(3/4), 131-165.

Mauldin, T. & Meeks, C.B. (1990). Sex differences in children's time use. Sex Roles, 22(9/10), 537-554.

Meehan, A.M. & Janik, L.M. (1990). Illusory correlation and the maintenance of sex role stereotypes in children. Sex Roles, 22(1/2), 83-95.

Melnick, S.L. & Raudenbush, S.W. (1986). Influence of pupils'gender, race, ability and behavior on perspective and experienced teachers' judgment about appropriate feedback (Research Series 175). Washington, D.C.: Office of Education, Research & Improvement. (ERIC Document Reproduction service No. 276 725).

Moulton, J., Robinson, G., & Elias, C. (1978). Sex bias in language use: "Neutral" pronouns that aren't. American Psychologist, 33,1032-1036.

Murphy, S. (1986). Sex equity/inequity in teacher-child interaction in day care classrooms. (ERIC Document Reproduction Service No. ED 297 862).

Nilsen, A.P. (1987). 3 decades of sexism in school science materials, School Library Journal, 34(1), 117-122.

Pomerleau, A., Bolduc, D., Malcuit, G., & Cossette, L. (1990). Pink or blue: Environmental gender stereotypes in the first two years of life. Sex Roles, 22(5/6), 359-367.

Purcell, P. & Stewart, L. (1990). Dick and Jane in 1989. Sex Roles, 22(3/4), 177-185.

Richmond, V.P. & Dyba, P. (1982). The roots of sexual stereotyping:The teachers as a model. Communication Education, 31, 265-273.

Scott, K. (1986). Effects of sex-fair reading materials on pupils' attitudes, comprehension and interest. American Educational Research Journal, 23, 105-116.

Scott, K.P & Summer, S.F. (1979). Children,s reactions to textbooks stories in which females are protrayed in traditional males roles . Journal of Educational Psychology, 7 (8), 396-402.

Serbin, L.A., Connor, J.M., Burchardt, C., & Citron, C.C. (1979) Effects of peer presence on sex-typing of children's play behavior. Journal of Experimental Child Psychology, 27, 303-309.

Serbin, L.A., Connor, J.M., & Citron, C.C. (1978). Environmental control of dependent and independent behaviors in preschool boys and girls: A model for early independence training. Sex Roles, 4(6), 867-875.

Serbin, L.A., Connor, J.M., & Citron, C.C. (1981). Sex differentiated free play behavior: Effects of teacher modeling, location, and gender. Developmental Psychology, 17(5), 640-646.

Serbin, L.A., Connor, J.M., & Iler, I. (1979). Sex-stereotyped and nonstereotyped introductions of new toys in the preschool classroom: An observational study of teacher behavior and its effects. Psychology of Women Quarterly, 4(2), 261-265.

Serbin, L.A., O'Leary, K.D., Kent, R.N., & Tonick, I.J. (1973). A comparison of teacher response to the preacademic and problem behavior of boys and girls. Child Development, 44, 796-804.

Serbin, L.A., Tonick, I.J., & Sternglanz, S.H. (1977). Shaping cooperative cross-sex play. Child Development, 48, 924-929.

Simpson, A.W. & Erickson, M.T. (1983). Teachers' verbal and non verbal communication patterns as a function of teacher race, student gender, and student race. American Educational Research Journal, 20, 183-198.

Smith, N.J., Greenlaw, M.J., & Scott, C.J. (1987). Making the literate environment equitable. Reading Teacher, 40(4), 400-407.

Tetenbaum, T.J. & Pearson, J. (1989). The voices in children's literature: The impact of gender on the moral decisions of storybook characters. Sex Roles, 20(7/8), 381-395

Todd-Mancillas, W.R. (1981). Masculine generic=sexist language: A review of literature and implications for speech communications professionals. Communication Quarterly, 29, 107-115.

Vaughn-Roberson, C., Tompkins, G.E., Hitchcock, M.E., & Oldham, M. (1989). Sexism in basal readers: An analysis of male main characters. Journal of Research in Childhood Education, 4(1), 62-68.

Vogel, D.A., Lake, M.A., Evans, S., & Karraker, K.H. (1991). Children's and adults sex-stereotyped perceptions of infants. Sex Roles, 24(9/10), 605/616.

Weiller, K.H. & Higgs T. (1989). Female learned helplessness in sport: An analysis of children's literature. Journal of Physical Education, Recreation, and Dance, 60, 65-67.

Williams, J.A., Vernon, J.A., Williams, M.C., & Malecha, K. (1987). Sex role socialization in picture books: An update. Social Science Quarterly, 68(1), 148-156.

Abstract

This review of research discusses and summarizes research findings that describe the performance and treatment of students in the classroom according to their gender. The findings have been classified into three areas: a) Classroom interactions: teacher-student interactions and student-student interactions; b) Instruction-related features: classroom activities and materials; and c) Participant perceptions of gender roles: teachers' and adults' perceptions of children's gender and students' stereotypic gender cues in relation to themselves and others. An important amount of research in teacher-student interaction reveals that teachers continue to have gender bias in their professional performance. Research demonstrates that gender equity values in teachers is an unfulfilled goal. Findings on instruction-related features reveal that some improvement has been made in sex equitable representation in textbooks and other instructional materials, but there is a need to continue promoting instructional activities that do not distinguish students by sex. The review also reveals that children interact according to very strong stereotypic gender schemas. There is evidence that a non-sexist curricula can make a difference in children's gender equity knowledge and values.